

EMERGING CHALLENGES IN LAND USE REGULATION SYSTEM: A CASE STUDY OF MURREE, PAKISTAN

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ABSTRACT

Most of the cities of Pakistan have expanded arbitrarily. Among these cities several had some sort of development plans, to guide the city's future growth. Due to one reason or the other, the city developments have not taken shape as per plans. However, development projects as per these plans were randomly taken up by Authorities, which can be termed as partial implementation of Plans. Consequently, these projects provide temporary relief regarding some specific problems of that city, but at the same time triggered numerous interrelated issues for which local authorities were not pre-prepared. A need is being felt for plan oriented development rather than project oriented development, for which lot is needed in policy and strategy formulation, institutional strengthening and implementation. This paper aims at appraising the land use regulation system of Murree city, that has expanded in the absence of any preconceived plan. The success it has achieved with prevailing system, with respect to existing land use pattern and its implications for stakeholders, especially tourists and local residents, all relate to the research query. Findings of the research reveal that the growth of Murree has been without any specific pattern or pre-conceived plan for over three decades. Murree lacks basic amenities of life in qualitative and quantitative terms. In this regard, the most crucial aspect relates to lack of balance in distribution of neighborhood and sub-neighborhood level facilities. Due to this centralization of amenities, parking is becoming one of the major problem for local residents and the floating population as well. Building byelaws and zoning regulations of Murree also need to be adapted as per local conditions.

Keywords: Land Use Regulation, Land Use Challenges, Development Planning, Murree City

INTRODUCTION

Land use planning is a critical part of the physical development process of a city. It is a regulation system through which people are motivated to choose between the land uses options that can fulfill their socio-economic needs, as well as ensure sustainable physical development for the area (UNFAO, 1996). The range of land use regulation system may vary from country to country depending upon area coverage, statutory framework, prevailing policies, institutional setup, resources, character of city and other urban issues specific to that particular city. Similarly, the nature of problems related to land use regulation and its repercussions have been different in developed and developing world. In the developed world, the problems caused by expansion of cities are pressing, but still manageable. On the other hand, in the case of the developing countries the land use plans are usually part of Master Plans or of some other forms of development plan, but are rarely implemented owing to various reasons (UN Habitat, 2015). In this scenario, the land use pattern takes a disorganized form, rather than a controlled and guided form, resulting in undue urban sprawl and all sorts of urban management and environmental issues. In the developing countries, owing to significant urban population living under poverty line, sizable population is compelled to occupy the areas that are disaster prone (Gencer, 2013). Consequently, when major natural and man induced disasters hit these urban areas it results in colossal damage to human life and property. These events highlight the need for sustainable land use planning

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along with main streaming requirements of climatic change adaption and disaster management (World Bank, 2014).

In the present era, urban sustainability is the desirable goal for any planning agency. Various aspects of urban sustainability have been pointed out by researchers (Grimm et al. 2008; Pickett et al. 2011; Liu et al. 2014; Wu 2014). Sustainability of any city can only be ensured if its growth process follows a preconceived plan or at least a thinking process that has been carefully and logically knit through guidelines from international practices, adapted to match local conditions, with generous contribution from stakeholders (Huang, et. al., 2015). Absence of land use planning can result in conversion of rural land into residential commercial and other uses of land and can cause suburban sprawl (López et. al., 2001; Thomlinson and Rivera, 2000).

Modern progress in communication and transportation systems, growing population, and the practically nonexistence of land-use planning regulation has steered the transformation of countless earlier agricultural lands to urban built-up areas and subsequently, suburban sprawl (López et. al., 2001; Thomlinson and Rivera, 2000).

Pakistani cities have experienced large influx of rural population and refugees, in various eras of development (Qadeer, 1997). This mass influx, along with natural increase, has contributed to the undesired haphazard expansion of urban areas. The most affected in this regard are the provincial capitals. Overall, about 40% of country's population is currently residing in urban areas (UN Habitat, 2015).

Most cities of Pakistan, especially in the province of Punjab, have attempted to equip themselves with rules, and regulation and human resources that can be considered as an effort towards development control (Government of Punjab, 2013). But the current situation of most of Pakistani cities today indicates that these efforts have not resulted in much success. Beside other reasons, the dilemma of our cities is that polices and plans structured for urban areas are rarely implemented (UN-Habitat, 2015). The gap between implementation and framing of policies and plans has multiple reasons that may vary from city to city and province to province (Qadeer 1997). In some cases, polices and plans are expert driven and not stakeholder driven, in some other cases the decision makers are not aware of ground realities of a city.

Most Pakistani cities and towns have not had relevant capacity for development that can contribute towards implementation of policies (UN-Habitat, 2015). Some cities are equipped with most of the paraphernalia and prerequisites of implementation, but they lack political will towards

development control, owing to various latent or obvious reasons. In short, the development in cities is either completely uncontrolled or project oriented, rather than plan oriented. Consequently, local governments, instead of exploring their own avenues of revenue generation, lookup to provincial and federal governments for development funds, resulting in projects prioritized by the same (UN-Habitat, 2015).

Murree City was developed without any baseline development plan. When the British took over Punjab in 1849 they started looking for some climatic relief spots for their army and associated personnel. In this regard, they selected Murree as their preferred hill station in 1851 and procured hill tops from local Dhond Tribe. Murree was a pastureland near the village known as Musiari at that time. With logistic support available from a well-established cantonment area of Pindi, it was much easier to develop the hill station, which took its initial form in a very limited time span. In 1851 Commissioner and Deputy Commissioner of Rawalpindi established their offices at Murree. This set a new trend for tourists and businessmen that made their investments in the area. In 1851 Murree Sanatorium Committee was established. In 1853 British Army built barracks for its soldiers in Murree, which started formal housing in the city. The famous Mall Road was developed in 1860, with permission to build only on one side of the road, to preserve the skyline. This building regulation prevailed for about hundred and thirty years. In a short span of time cantonments were built at Kuldana, Gharial, Barian, Kalabagh and Upper and Lower Topa, In the meantime, a number of English medium schools were constructed in the city including Lawrence College, Saint Dynes and Convent of Jesus and Marry. Entrance of the locals was restricted to the Mall Road and this restriction prevailed till independence. The summer capital was later shifted to Shimla, but developments made during British era paved the way for a tourist hub that Murree is today.

The land use expansion of Murree has been dictated by the land ownership pattern and propensity of commercialization to tap the tourism potential of the city. In this regard significant role has been played by the provincial commercialization policy that has safeguarded the interest of investors, rather than the needs of the city (PLG, 2004). As a result Murree has become a city with almost no statutory framework to guide development, with transportation, parking, hierarchy and balance of amenities, ribbon development, environmental concerns, local of institutional capacity, local of disaster management capacity, economic issues as its major challenges.

This paper aims at appraising the land use regulation system of Murree city that has expanded in the absence of any preconceived plan. The paper also reviews the success Murree has achieved with the prevailing system, with respect to the existing land use pattern and its implications for stakeholders, especially tourists and local residents. Moreover, this paper intends to answer two main questions; firstly it aims to identify the current pattern of the town's existing land use and secondly it aims to review the limitations and challenges faced by its land use regulation system. Through review of two Master Plans (Housing and Physical Development Plan, 1988 and Master Plan to develop Murree as a pollution free town, 2013) that were prepared for Murree in the last twenty eight years, the paper highlights the need for approval and notification of a Master Plan and at the same time suggests certain improvements prior to the Master Plan's approval.

METHODOLOGY

Review of Existing Situation

The reviewing of land use regulation process in Murree involved various steps in order to conclude certain observations regarding the process. As a first step to get insight of the existing situation of land uses in Murree and to identify policy gaps, issues and implications for future growth, a review of demographic and socioeconomic trends, planning policies and urban growth strategy was carried out. Besides this analytical review of land allocation for all land uses such as commercial, residential, open spaces, institutional was done. For this purpose, secondary data regarding land use maps, master plan, reports were collected from City District Government Rawalpindi (CDGR), Rawalpindi Development Authority (RDA), Tehsil Municipal Administration Murree (TMAM), Housing and Physical Planning Department Punjab (H and PPDP), Tourism Development Corporation Punjab (TDCP), Forest Department Murree and Water and Sanitation Authority (WASA).

The primary data collection included structured interviews and sample questionnaire surveys with various stakeholders including CDGR, RDA, TMA, TDCP, Forest Department and NESPAK. A total of twenty structured interviews were conducted from aforementioned officials. A checklist was used to draw information regarding various trends in expansion (especially in disaster prone areas), development control, parking, usage of road by various modes of transport, public transport, environmental degradation and change of land use. Similarly to get public perception and priorities,

questionnaire survey was done. A total of hundred respondents were interviewed. Survey was administered face to face and a random convenience sampling techniques was adopted.

RESULT AND DISCUSSION

With enhanced accessibility to Murree and non-existence of any significant development in other tourist locations, Murree is experiencing immense tourist influx. This influx on one hand offers better economic opportunities to local populations associated with tourism, and on the other hand it is creating problems of administrative and municipal nature for public authorities at Murree. Besides this seasonal pressure on city's existing facilities and infrastructure, it is experiencing natural growth and its need for more tourist related buildings is increasing every year. This has resulted in conversion of more residential land into commercial land and utilization of forest land into urban buildup area. Moreover, non-availability of natural gas supply to Murree for many decades and shortage of gas in winters, has resulted in cutting of trees for heating and cooking purposes. All these factors have contributed to environmental degradation in Murree and loss of its scenic beauty. Absence of efficient and adequate public transport compel tourists to use private or hired vehicles which create huge problem of parking in the main city of Murree, especially during peak tourism season. Murree has a hilly terrain which offers very limited plain pockets to build parking lots. Moreover, narrow roads and ever increasing congestion due to construction of new hotels and other commercial buildings in the central city has further enhanced traffic and parking problems.

Another major problem that has developed for local residents of Murree over the last couple of decades is the massive increase in land prices in the central city, due to conversion of most of the land into commercial land uses. This has left no option for less privileged and rental residents, but to live in hinterland of Murree and commute daily.

Murree city's land use plan was prepared under Master Plan Department in 1988 which got notified at that time but remains not precisely intact after so many years. However, a land use plan was prepared under the project titled 'Master Plan to Develop Murree a Pollution Free Town 2031', which has not been notified till date. Without guidance of an overall plan, the city kept on expanding, without any development strategy or control. This not only contributed to haphazard urban sprawl, it also made the city to lose its balance related to distribution of amenities. All facilities were concentrated in the central city whereas the hinterland was deprived of

the same. In the absence of an efficient local public transport system the commuters faces difficulties to reach their desired destinations of livelihood, education and social life.

Owing to lack of planning and development control in Murree, the population settling in disaster prone areas could not be checked. Studies related to disaster risk assessment were conducted from time to time, but none of the same were made part of building byelaws and zoning regulations. It is high time that some revolutionary steps are taken to prepare and notify an overall development plan for Murree and supplement it with various action plans. Moreover, it is essential that authorities should start looking at Murree as a city and tehsil headquarter, besides it being recognized as a tourism hub. While emphasizing the need for notification of Murree's Master Plans, it is most appropriate to observe the quality of these plans in the context of its relevance, explicitly, actualization, coverage and understanding of urban and regional issues of the city and its environs.

Review of Master Plan 1988-2013

The first Master Plan for Murree was prepared in late eighties. At that time Murree had population of 21,801 (projected by Master Plan) and it was anticipated to grow to 42,776 by the end of plan period in year 2013. It was also reported that 431,000 tourists visited Murree in 1987 out of which 68,000 opted to stay overnight or more. The tourist population was projected to be 1,437,663 annually in the year 2013.

Most of the concentration of the population was in and around main tourist resort area. The livelihood of residents of urban Murree was dependent on tourism and rural areas were dependent on agriculture. Due to lesser economic options the growth rate of Murree did not rise much and even in certain time period it reduced. The reason for this was out migration of local residents to other urban areas of Pakistan.

The Master Plan of Murree was focused on the developed urban area, but it covered all aspects of urban life including tourism. For some reason this Master Plan could not be notified and also no review of the same was conducted. Therefore, the development of Murree happened in this period without any restrictions or guidance of any Master Plan. The only document or tool that the development agencies could refer to was building byelaws and zoning regulations. This document too lost its validity and usefulness with the passage of time, as it could not provide required guidance to the developers, builders and planners, regarding many areas of development. This gap in the statutory framework resulted in the expansion of Murree in an

undesired pattern, without effective development control. Table 1 provides the land use distribution of Murree town in the year 1988. If these look at these land use percentages are compared with today's standards, it seems that Murree town was a balanced town in terms of its land use distribution.

Murree at that time was a small town and the rural areas were not considered as part of urban Murree and maybe there was not enough interaction between the two that needed planning of hinterland. The only crises situation in Murree was the influx of tourist in the summer season that left roads of Murree choked. Murree as a town itself was not a problem area. The plan was taken up for the plan period of twenty five years in the future, but it failed to anticipate the pace of growth of Murree city. The adopted approach can be justified, as the transport projects taken up at later stages and law and order situation that changed the status of other tourist destination (contributing to the tourist influx to Murree) could not have been anticipated earlier.

The 1988-2013 Master plan of Murree did not provide any guidelines to check ribbon development or even to identify it as a threat towards planned development at later stages (Table 1). Consequently, Murree's commercial areas flourished along road sides gradually. With all sorts of shops along road sides and other facilities following their footsteps, the very concept of planned neighborhoods and

Table-1: Land use Distribution of Murree Town in Year 1988
Source: Master Plan of Murree Town, 1988-2013

S. No.	Land Uses	%ages Yr. 1988
1	Residential	26.88%
2	Parks and Play Grounds	19.04%
3	Institutions (Education and Health)	17.16%
4	Public Building	13.38%
5	Commercial	4.21%
6	Graveyard	3.99%
7	Industrial	0.11%
8	Circulation	15.23%
Total		100%

Note: Reserved Forest Area and Cantonment area were not included in this distribution.

sub-neighborhoods suggested through the Master Plan was totally defeated. The Plan did not refer to disaster risk assessment studies conducted earlier and failed to identify hazardous areas in the existing or proposed studies. Moreover, it did not make any effort to do the same in areas it identified as potential growth areas.

The Master Plan of Murree 1987-2013 was focused on the urban area and did not put enough light on the reserved forest areas of Murree. Thus, it did not provide sufficient guidelines to conserve the natural habitat of Murree's wildlife and its precious forest areas, that included very old coniferous trees and some rare species of deodar trees. Similarly, Murree had some heritage sites from colonial times that interested foreign tourists. The Master Plan did not propose any policies regarding safeguarding these. The Master Plan anticipated enormous increase in tourist population, but did not provide any guidelines for efficient public transport services and road efficiency. Moreover, it also failed to indicate the relationship of the location of traffic generating land uses with transportation.

A noteworthy drawback was that the whole effort of the Master Plan was not backed by a comprehensive implementation strategy. Following are some shortfalls in the implementation strategy of the Master Plan:

- a. The policies and proposals were vague in nature, failed to provide clear cut and effective projects. Projects proposed were without phasing and had crude cost estimates;
- b. It was not clearly mentioned whether these projects were to be taken up by public sector or by private sector or by mutual partnership;
- c. The implementation tools like guidelines for byelaws and zoning regulations were not provided that may have delivered the required launching pad;
- d. The institutions responsible for execution of these projects were not identified along with the guidelines of their capacity buildings;
- e. The public participation and empowerment of concerned population strata was not given that could have provided sense of ownership among the masses and may have been the driving force behind approval and implementation of this master plan.

The master plan had various good and bad points, but the problems with the Master Plan would have been resolved, if it was subjected to review by various authorities, academia and intellectuals. At that time some of the development that

took place and contributed to unplanned growth could not have been anticipated, but the built in mechanism for review of the Master Plan after every five years could have made it possible to mitigate the later year's problems. In this regard, the importance of notification of this Master Plan cannot be denied.

Review of the Master Plan for Murree 2013-2032

The second Master Plan for Murree was prepared in year 2013, after the previous Master Plan period had expired. The previous Master Plan was not notified and the development for twenty five years went on without any formal plan. The new Master Plan prepared in year 2013 was expected to fill the gaps of the previous Master Plan and provide solutions for the very visible urban problems, created by the absence of a comprehensive plan for the city, with development potential. The Government of Punjab felt the need for a comprehensive plan for the city and entrusted Tourism Development Corporation of Punjab (TDCP) the task to cover all the aspects of urban life in their Tourism Master Plan launched at that time. With some variation in Terms of Reference (TOR) of the assignment the task was initiated by the authority.

The engaged consultants made a very good effort in the preparation of the Master Plan while covering all the characteristics of Murree urban area. Besides studying existing features of land uses, they also reviewed the old Master Plan for its existing potentials, policies and proposals. This exercise provided a base to initiate the study. Besides the Master Plan (1988 – 2013) the new document reviewed the various policies and strategies of national and provincial level related to urban planning. The document analyzed Murree City in the light of these reports and its application in case of the city. Moreover, it analyzed the prevailing intuitional setup in Murree and also commented on the capacity of implementing agencies of the Master Plan.

It also studied the past land use growth pattern of Murree and analyzed the land use growth in the historical perspective. In this regard, it was observed that there was urban sprawl in Murree, in the form of segregated pockets outside the main urban core. It was also pointed out that the topographical limitations related to the availability of land compelled people to vertical expansion, despite unstable soil conditions and disaster prone areas in the vicinity. Furthermore, it studied the daily commuting pattern of Murree city to provide basis for detailed transportation analysis. The good thing about this document was that it studied in detail the major aspects of land use with respect to sustainability. With

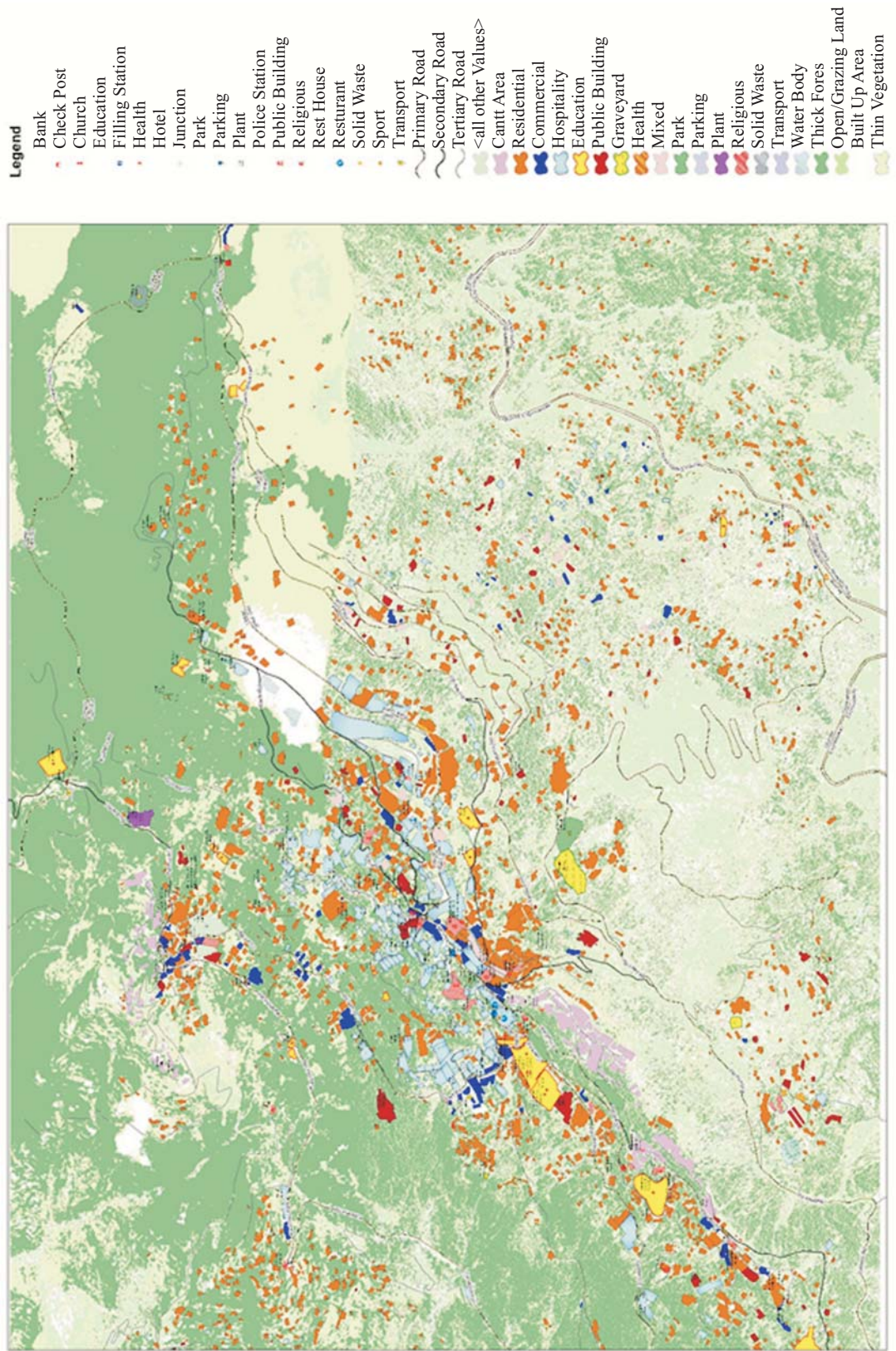


Figure-1: Land Use Classification Muree City
 Source: Master Plan to Develop Muree a Pollution Free 2031, Existing Scenario Volume-I, Tourism Development Corporation, Punjab-June 2013

comprehensive reviews and analysis of various documents related to urban development the document proposed policies related to various sectors. In this regard Sustainable land use planning policies (SLP) were dealt with separately. Similarly, relevant policies were proposed on all aspects of urban growth, in the respective sections.

In the area of disaster risk-resilient land use planning the range of safely located building were enhanced to all buildings where public gathering took place, in addition to educational and health buildings. Moreover, provisions of document recently prepared by UNDP regarding seismic micro-zonation of Murree were streamlined with the master plan provisions. In this regard, peak ground acceleration (PGA) value maps for each area were prepared and the information was made part of building byelaws and zoning regulations. This criteria was applied to existing buildings as well, by introducing retrofitting techniques.

In the second section of exploring growth opportunities/corridors more care could have been practiced to discourage the prevailing trend of ribbon development. The Master Plan proposes a density proposed to 252 persons per acre, which seems on higher side and may need to be revisited. Moreover, provisions of middle and lower level amenities could have been emphasized for neighborhood and sub-neighborhood levels, besides commercial activities and parking. The precincts provision policy, recommended in the Master Plan, could be healthy practice for urban uplift of Murree. However, this policy framework needs to be reinforced by comprehensive detailed planning and designing, with ample inclusion of all stakeholders, including prospective end users and land owners.

Murree is a city that has expanded far beyond its urban limits. The land use aspects in the master plan are focused on the urban core within crow flying of less than 2.5 km from GPO Murree. This approach may not solve problems of Murree city. Its physical expansion, considering the socio-economic relationship of main core and hinterland, should be studied carefully, to revise and acknowledge the actual boundary of the city. Furthermore with emphasis on the main core the focus remains on tourism and with limited option of land, new avenues cannot be recommended.

ANALYSIS AND DISCUSSION

The Master plan of Murree prepared in year 2013 has not been notified. Similarly, the model building byelaws, zoning regulations and subdivision regulations issued by the Government of Punjab, need to be adapted to the city's

specific conditions. Functions like approval of housing schemes and change of land use should be given to TMA, as they have better vision of their administrative jurisdiction. Owing to the trend of commercialization in the central city, most of the resident population has moved to the outskirts, outside the municipal boundary. There is a need to revise the municipal boundary, considering the physically coherent development and future growth. There is also a need to take up conservation of the forest and preservation of heritage site in a planned manner. Moreover, the development in disaster prone areas need to be checked with applying international protocols for resettlement, if required. To ensure implementation of plans and guide development in a proper manner there is a need for extensive institutional strengthening among development agencies related to Murree.

At the analysis stage, to evaluate the sustainability of existing land use it was crucial to look at Murree from the resident's perspective, to facilitate the analysis process two main aspects were given main consideration to evaluate efficient provision of amenities during local respondent's survey. The first one was the location criteria and the other was called allocation criteria of various amenities and facilities.

Table 2 depicts that average distance of metaled road from most of the household is 0.59 km, whereas average distance of sub-neighborhood parks was reported to be about 4.99 km and the demand for location of shopping areas was preferred to be at 2.01 km. These statistics show that most of the areas from which respondents belonged were not adequately served with respect to these facilities. The end users of these facilities could not reach these facilities conveniently in the hilly terrain of Murree, even in fair weather conditions.

Table-2: Distance of daily use amenities from respondent's household.
Source: Field survey

S. No.	Various Amenities	Average Distance for HH (in km)
1	Metaled Road	0.6
2	Sub-Neighborhood Park	4.9
3	Consumer and Demand Goods Shopping Area	2.0
4	Hospital	6.7
5	Play Ground	3.2.
6	Public Graveyard	4.5

The reason for this imbalance of facilities is the development taking place randomly in small parcels of private land or along the roads in the form of ribbon development, without any development control or a pre conceived plan. Parks in Murree have been developed considering tourism aspect rather than the needs of the local residents.

Another important aspect of the survey was the results of priorities of local residents regarding provision of various amenities. Table 3 and Figure 2 show the priorities of survey respondents. It can be observed that education is second priority of most of the residents, with first being health facilities. The obvious reason is that the city lacks health facilities especially in the public sector. People have to rush towards Islamabad in case of major health problems. The other priorities were clean drinking water, shops offering daily use goods and access road to their residences. The demand for convenience shops owes to the fact that the concept of independent neighborhoods does not prevail in Murree and grocery shops are usually found on road sides or in central part of Murree. Surprisingly, the demand for public transport and recreation facilities was one of the least priority areas for local residents.

The visitors to Murree perceive the city from a different point of view as compared to the local residents. Their needs and expectations from the city's land use are also different. Therefore, it was essential to record the perception of the tourists and the expectations from the city's land use.

Murree is considered as a family tourist resort and is most popular tourist destination for local tourists from all over Pakistan. The day trippers are mostly from nearby areas like Rawalpindi, Islamabad or Kashmir. People who choose to

stay overnight or more are mostly from distant areas. The tourist in Murree, irrespective of their duration of stay, looks at Murree's land use from the perspective of parking availability, easy access to shopping and recreation areas, availability of places for recreation, greenery, road furniture, sitting spaces, sufficiency of roads, availability of hotels and restaurants, natural landscape and many other venues to the satisfaction of their stake.

Table 4 and Figure 3 depicts that the non-availability of tourist information center and parking are the main problems in Murree from tourist's point of view. The second and third priorities for the tourists are the provision of trauma centers and filling stations.

People seem satisfied with provision of hotels and recreational facilities. As the tourists mostly visit Murree on a personal or hired car, they ranked public transport at a lower priority. Other amenities and shops offering general use items were least important for the tourists.

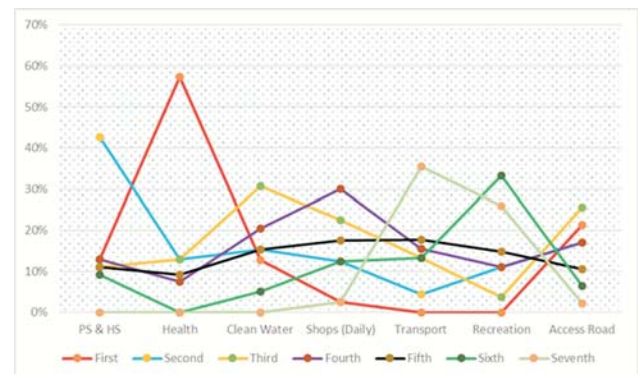


Figure-2: Ranking of resident's priorities for provision of amenities.

Table-3: Resident's priorities for provision of amenities.

Priorities	PS & HS	Health	Clean Water	Shops (Daily Use)	Public Transport	Recreation	Access Road
First	13.0	57.4	12.8	2.5	0.0	0.0	12.3
Second	42.6	13.0	15.4	12.5	4.4	11.1	17.0
Third	11.1	13.0	30.8	22.5	13.3	3.7	25.5
Fourth	13.0	7.4	20.5	30.0	15.6	11.1	17.0
Fifth	11.1	9.2	15.5	17.5	17.8	14.8	10.6
Sixth	9.2	0.0	50.0	12.5	13.3	33.4	6.5
Seventh	0.0	0.0	0.0	2.5	35.6	25.6	2.1
Total	100%	100%	100%	100%	100%	100%	100%

Table-4: Ranking of tourist's priorities for provision of amenities.

Priority List	Tourist Info. Centers	Parking	Trauma Center	Filling Station	Hotel	Recreation	Public Transport	Amenities	General Shops
First	22.9	52.6	18.2	12.8	7.1	6.7	6.7	3.0	0.0
Second	12.5	10.5	36.4	30.6	14.3	6.6	13.3	3.0	8.7
Third	29.2	18.4	18.2	23.2	7.1	6.7	10.0	18.2	0.0
Fourth	12.5	5.4	20.4	12.7	25.1	23.3	13.3	6.1	0.0
Fifth	14.6	0.0	4.5	5.2	7.1	23.3	3.3	24.2	4.4
Sixth	8.3	7.9	2.3	5.1	14.3	16.8	6.7	9.1	0.0
Seventh	0.0	2.6	0.0	5.3	0.0	10.0	30.0	12.1	13.0
Eighth	0.0	0.0	0.0	5.1	3.6	6.6	13.4	21.2	21.7
Ninth	0.0	2.6	0.0	0.0	21.4	0.0	3.3	3.1	52.2
Total (%)	100	100	100	100	100	100	100	100	100

CONCLUSION AND RECOMMENDATIONS

For over three decades, the growth of Murree has taken place without any specific pattern or a pre-conceived planning approach. In all the projects and service plans, Murree has emerged merely as a tourist hub with weak depiction of planning as a city or tehsil headquarter. This trait has badly affected the overall land use pattern of Murree in multiple dimensions, creating huge piles of incompatibilities and culminating diverse complexities in the city's operational efficacies. Predominantly, these practices have originated as a result of clumsy approach, taking tourism as a major source in the employment sector. Unfortunately, no heed has been paid to find new avenues for economic growth for Murree city. Today, Murree lacks basic amenities both in qualitative as well as quantitative terms. In this regard, what it lacks most is the balance of distribution in neighborhood and sub-neighborhood level facilities. Moreover, due to centralization of amenities, parking is becoming a major problem for the tourist influx and for the local residents as well. Emphatically, the creeping vitality of Murree seeks the building byelaws and zoning regulations to be tailored as per local conditions in the overall planning process.

With regards to environmental concerns, studies pertaining to disaster assessment were conducted especially in the areas of landslides and seismology, but the same were never streamlined with the ongoing development activities. Similarly, conservation of habitat of wild life/forest areas

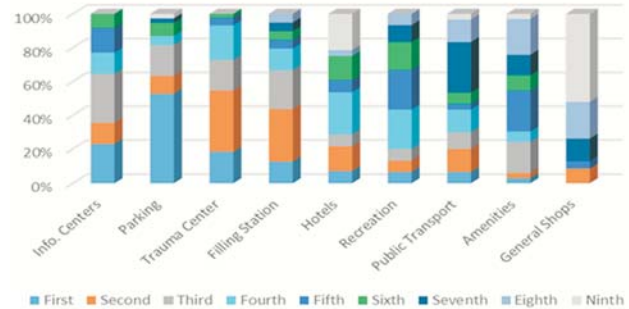


Figure-3: Ranking of tourist's priorities for provision of amenities.

and heritage preservation being practiced also lack element of true spirit. Special training programmes are required to be inducted into the disaster risk management area to safeguard precious lives and properties.

The approval and notification of the Master Plan need to be expedited. In this regard, extensive institutional strengthening is required to enable the development agencies to understand the working mechanisms and to ensure proper implementation of master plans. The standardized format for classification and reclassification of land uses issued by the Government of Punjab needs to be reviewed and upgraded to the level of sustainable land use planning, by incorporating the aspects related to environmental sustainability, socio-economic uplift and disaster resilience. To strengthen development agencies, finance mechanisms also need to be revisited and new avenues for revenue generation need to be explored, with

the TMA being the main beneficiary and service provider at grass-root level.

Murree deserves to be acknowledged primarily as an administrative head for a sizeable resident population. The city faces multifarious problems which are interrelated and interdependent in nature owing to the diversity of city's characteristic. In this regard, hierarchy of land uses should

be established to achieve a balanced distribution of amenities for all areas of Murree city and its environs, with the national and international standards of the cities attracting tourists across the world. Moreover, conservation of habitat/forest areas and preservation of heritage buildings need to be accorded top priority, and in this regard a comprehensive plan needs to be prepared for implementation in phases, so that the routine activities are not seized to a standstill position.

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